

MASSACHUSETTS WATER RESOURCES AUTHORITY



INFILTRATION / INFLOW LOCAL FINANCIAL ASSISTANCE PROGRAM

PROGRAM GUIDELINES FOR SEWER PROJECTS

Updated July 2016

MASSACHUSETTS WATER RESOURCES AUTHORITY
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SECTION 1 - INTRODUCTION

1.1 Establishment of Massachusetts Water Resources Authority's Infiltration / Inflow Local Financial Assistance Program

The Massachusetts Water Resources Authority (MWRA) Board of Directors, by their vote on August 19, 1992, established the MWRA Infiltration/Inflow (I/I) Local Financial Assistance Program and authorized an initial two-year program budget of \$25 million. The Board of Directors approved additional funds for the program as follows: June 28, 1995 - \$38.75 million for Phase 2; June 24, 1998 - \$37 million for Phase 3; June 13, 2001 - \$40 million for Phase 4; June 23, 2004 - \$40 million for Phase 5; June 28, 2006 - \$40 million for Phase 6; June 24, 2009 - \$40 million for Phase 7; June 27, 2012 - \$40 million for Phase 8; and June 25, 2014 - \$80 million for Phase 9 and \$80 million for Phase 10. Through Phase 10, MWRA's total program commitment for funding local I/I reduction projects is \$460.75 million.

1.2 Purpose

The purpose of the MWRA I/I Local Financial Assistance Program is to provide incentives in the form of grants and interest-free loans to MWRA's 43 sewer member communities in order to effect modifications to community-owned collection systems that will permanently reduce infiltration and/or inflow tributary to MWRA treatment facilities. The priority of the MWRA I/I Local Financial Assistance Program is the reduction of storm related (and/or tidal) inflow to relieve hydraulic peaks in the collection and treatment systems, thereby reducing surcharging, raw sewage overflows and operational costs. Projects intended to reduce groundwater infiltration are also eligible for financial assistance. While the Program's major objective is funding I/I reduction construction projects, planning and design costs required to implement I/I reduction construction projects are also eligible for financial assistance. A list of eligible and ineligible project costs are provided in Sections 2.7 and 2.8, respectively.

1.3 Term of the Program and Sunset Dates

Funding distributions under Phases 1 through 5 of the I/I Local Financial Assistance Program are complete through fiscal year 2012. Funding distributions under all subsequent phases (Phases 6, 7, 8, 9, and 10) are approved through FY25 except as amended by the grant portion sunset dates noted within subsections (a) and (b) below.

- (a) If an eligible community fails to take advantage of its total Phase 6 allocation by June 30, 2018, the community will relinquish its undistributed funds associated with the 45 percent grant portion as allocated within Phase 6.
- (b) If an eligible community fails to take advantage of its total Phase 7 allocation by June 30, 2021, the community will relinquish its undistributed funds associated with the 45 percent grant portion as allocated within Phase 7.

The MWRA Board of Directors will review the relative merits of the overall Program annually. In the event that the Program is concluded prior to the current term, all financial assistance commitments made prior to the conclusion of the Program shall be fulfilled under the conditions established in each Financial Assistance and Loan Agreement.

1.4 Definitions and Abbreviations

A listing of relevant definitions and abbreviations are presented as APPENDIX A and APPENDIX B, respectively.

SECTION 2 - FINANCIAL ASSISTANCE APPLICATION AND DISTRIBUTION OF FUNDS

2.1 Overview

Binding commitments to provide financial assistance for local I/I reduction projects will be issued by MWRA's Executive Director, Director of Finance, or Treasurer in the form of a "Financial Assistance Agreement". An offer for financial assistance will be made by MWRA following the review of a "Financial Assistance Application" and the determination by the Authority that the project is eligible for financial assistance. The filing of a Financial Assistance Application by a community will not constitute a binding commitment by MWRA to provide financial assistance. A Financial Assistance Agreement may be executed at the discretion of MWRA subject to the availability of Program funds. Financial Assistance Agreements will be executed with communities and project funds will be distributed on quarterly funding distribution dates. **The distribution dates will be on or about February 15, May 15, August 15, and November 15 of each year.**

To be eligible to execute a Financial Assistance Agreement on a particular funding distribution date, the community must have submitted a complete Financial Assistance Application in sufficient time to be reviewed and approved by MWRA staff thirty (30) calendar days prior to the proposed funding distribution date and must agree to begin the project within ninety (90) calendar days of execution of the agreement. **Additionally, community grant/loan funding applications that exceed \$2.0 million will be subject to 90-day notification to MWRA staff prior to the target distribution date.** Based on the combined impact of all community Financial Assistance Applications (each quarter), the MWRA Executive Director may waive the 90-day notification rule. Financial Assistance Applications may be approved by the MWRA if the proposed project will reduce (or lead to the reduction of) I/I entering the regional collection system tributary to the MWRA-owned Deer Island Treatment Facility (see eligibility criteria in Sections 2.7 and 2.8).

2.2 Application for Financial Assistance

Each MWRA community may apply for funding under the I/I Local Financial Assistance Program by submitting one or more "Financial Assistance Applications" to:

Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129
Attn: Planning Department, Community Support Program

A sample Financial Assistance Application is provided as Attachment 1. Electronic copies of the Program Guidelines and Financial Assistance Application can be obtained from the Authority's web site at www.mwra.com. The direct link to the I/I Local Financial Assistance Program web page is: <http://www.mwra.com/comsupport/ii/iiprogram.html>.

The applicant should provide as complete information as possible about the proposed project. MWRA staff are available to assist in completing the application. The information provided will be reviewed by MWRA to determine if the project is a viable I/I reduction project and assess eligible project costs. Once a project has been approved and an award amount designated, MWRA and the community will cooperatively schedule the execution of a Financial Assistance Agreement.

2.3 Initiation Date for Eligible Project Costs

The initial date for determining community project costs that are eligible to receive funding under the I/I Local Financial Assistance Program is July 1, 2009. All costs incurred for I/I reduction work performed within MWRA service area communities on or after **July 1, 2009**, regardless of the beginning date of the project, will be considered for eligibility during review of a community's Financial Assistance Application. Eligible and ineligible project costs are outlined in Sections 2.7 and 2.8, respectively.

2.4 Financial Assistance Allocation Per Community

Phase 9 and 10 grant/loan funds, designated at \$80 million for each phase, have been added to the MWRA FY15 Capital Improvement Program. Both Phase 9 and Phase 10 grant/loan funds are allocated among the forty-three sewer member communities based upon each community's percent share of the Authority's Final FY15 wholesale sewer charges. The Phase 9 funds are approved for distribution beginning in FY15. Phase 10 funds will become available to each community in the fiscal year following the distribution of half of its Phase 9 funds (known as the "trigger" for Phase 10 funds).

In addition, previously unused funds from Phases 6, 7, and 8 have been rolled over into Phase 9. The rollover funds remain allocated to those communities for which they were originally allocated. I/I funding awarded to any community shall, in no case, exceed that community's total program allocation. Each community's total allocation and funds distributed are listed on the FUNDING SUMMARY table on the following page. Note that the FUNDING SUMMARY table is updated periodically and posted on the Community Support Program web page: <http://www.mwra.com/comsupport/ii/iiprogram.html>.

2.5 Maximum Financial Assistance Award Amount Per Project

All project information submitted as part of the Financial Assistance Application shall be used by the Authority to determine the portion of the total project cost eligible under the I/I Local Financial Assistance Program. Based on the determined eligible project cost, an "Award Amount" will be established for each project. The financial assistance Award Amount for each community project shall, in no case, exceed the lesser of:

- (1) the total project cost determined by MWRA to be eligible for financial assistance; or,
- (2) the Total Community Financial Assistance Allocation established in Section 2.4.

**MWRA I/I LOCAL FINANCIAL ASSISTANCE PROGRAM
FUNDING SUMMARY AS OF NOVEMBER 2016**

Community	Total Allocations (Phases 1 - 10)	Total Distributions (Phases 1 - 10)	Percent Distributed	Funds Remaining
Arlington	\$8,423,000	\$7,413,000	88%	\$1,010,000
Ashland	\$2,168,500	\$1,742,450	80%	\$426,050
Bedford	\$3,404,600	\$1,999,600	59%	\$1,405,000
Belmont	\$5,135,100	\$2,992,100	58%	\$2,143,000
Boston	\$132,171,200	\$83,711,976	63%	\$48,459,224
Braintree	\$8,359,000	\$5,915,800	71%	\$2,443,200
Brookline	\$13,165,200	\$7,666,200	58%	\$5,499,000
Burlington	\$5,102,800	\$5,102,800	100%	\$0
Cambridge	\$23,620,100	\$11,077,055	47%	\$12,543,045
Canton	\$3,965,900	\$2,675,900	67%	\$1,290,000
Chelsea	\$6,870,100	\$5,551,100	81%	\$1,319,000
Dedham	\$5,740,000	\$5,740,000	100%	\$0
Everett	\$8,071,500	\$6,650,500	82%	\$1,421,000
Framingham	\$12,125,000	\$7,255,910	60%	\$4,869,090
Hingham	\$1,632,500	\$1,632,500	100%	\$0
Holbrook	\$1,639,600	\$896,562	55%	\$743,038
Lexington	\$7,445,300	\$7,445,300	100%	\$0
Malden	\$12,283,900	\$4,593,900	37%	\$7,690,000
Medford	\$11,987,600	\$6,914,600	58%	\$5,073,000
Melrose	\$6,076,300	\$4,995,300	82%	\$1,081,000
Milton	\$5,564,500	\$3,736,500	67%	\$1,828,000
Natick	\$5,582,600	\$4,452,800	80%	\$1,129,800
Needham	\$6,257,600	\$2,892,150	46%	\$3,365,450
Newton	\$21,197,400	\$21,197,400	100%	\$0
Norwood	\$6,879,400	\$4,233,499	62%	\$2,645,901
Quincy	\$19,790,000	\$15,647,000	79%	\$4,143,000
Randolph	\$6,050,800	\$3,894,800	64%	\$2,156,000
Reading	\$4,629,100	\$3,785,100	82%	\$844,000
Revere	\$10,130,900	\$5,502,900	54%	\$4,628,000
Somerville	\$15,515,800	\$10,117,800	65%	\$5,398,000
Stoneham	\$4,919,900	\$4,919,900	100%	\$0
Stoughton	\$4,722,900	\$4,440,100	94%	\$282,800
Wakefield	\$5,966,900	\$4,659,800	78%	\$1,307,100
Walpole	\$3,680,000	\$3,042,000	83%	\$638,000
Waltham	\$13,732,400	\$11,377,400	83%	\$2,355,000
Watertown	\$6,285,800	\$3,661,800	58%	\$2,624,000
Wellesley	\$5,709,700	\$3,256,224	57%	\$2,453,476
Westwood	\$2,532,300	\$2,091,300	83%	\$441,000
Weymouth	\$11,480,900	\$7,490,900	65%	\$3,990,000
Wilmington	\$2,462,000	\$1,606,000	65%	\$856,000
Winchester	\$4,183,000	\$3,535,100	85%	\$647,900
Winthrop	\$3,393,400	\$2,807,400	83%	\$586,000
Woburn	\$10,695,500	\$8,962,500	84%	\$1,733,000
Totals	\$460,750,000	\$319,282,926	69%	\$141,467,074

2.6 Financial Assistance Grant/Loan Apportionment

For Phase 9 and 10 I/I Local Financial Assistance Program funding (total of \$80 million for each Phase), seventy-five percent (75%) of the total Award Amount will be provided as a grant and twenty-five percent (25%) will be provided as an interest-free loan. Communities will need to exhaust their rollover funds remaining from Phases 6, 7, and 8 prior to becoming eligible for distribution of Phase 9 and 10 funds. For Phase 9 and 10 funding, the interest-free loan portion will be repaid to MWRA in ten (10) equal payments over a ten-year period, beginning one year from the original quarterly funding distribution date (as established in Section 2.9). The loan can be repaid over a shorter period, if the community so desires. Loan repayment details are presented in Section 4.

For remaining Phase 6, 7, and 8 rollover funds, forty-five percent (45%) of the total Award Amount will be provided as a grant and fifty-five percent (55%) will be provided as an interest-free loan. Communities will need to exhaust their rollover funds remaining from Phases 6, 7, and 8 prior to becoming eligible for distribution of Phase 9 and 10 funds. For remaining Phase 6, 7, and 8 rollover funds, the interest-free loan portion will be repaid to MWRA in five (5) equal payments, over a five-year period, beginning one year from the original quarterly funding distribution date (as established in Section 2.9). The loan can be repaid over a shorter period, if the community so desires. Loan repayment details are presented in Section 4.

I/I Local Financial Assistance Program community funding distributions that include a combination of (1) remaining Phase 6, 7, or 8 rollover funds together with (2) Phase 9 or 10 funding, the interest-free loan portion will be repaid to MWRA in five (5) equal payments over a five-year period, beginning one year from the original quarterly funding distribution date (as established in Section 2.9). The loan can be repaid over a shorter period, if the community so desires. Loan repayment details are presented in Section 4.

2.7 Eligible Project Costs

I/I financial assistance awarded by MWRA shall be for the purpose of identifying, removing, and assuring elimination of infiltration or inflow entering the regional sewer collection system tributary to the MWRA-owned Deer Island Treatment Facility. MWRA employs MassDEP's Guidelines for Performing I/I Analyses and Sewer System Evaluation Surveys as its standard manual of practice. Projects that are not in strict accordance with MassDEP's I/I Guidelines may be eligible for funding if the applicant can demonstrate that undertaking the project is reasonable. Costs that are necessary for the effective reduction or removal of infiltration or inflow and eligible under the I/I Local Financial Assistance Program include, but are not limited to:

- (a) Construction, reconstruction, rehabilitation, alteration, remodeling or other improvements to sewerage facilities, storm drain facilities, plumbing and service laterals which will effect I/I reduction and activities incidental thereto, including but not limited to:
 - Pipeline replacement;
 - Sliplining or other methods for sewer pipe lining;

- Cured-in-place pipe (CIPP) lining and/or inversion lining;
- Joint testing and sealing;
- Service lateral repair, lining, and replacement;
- Manhole replacement;
- Manhole rehabilitation/sealing;
- Manhole cover and frame replacement;
- Installation of manhole inflow prevention devices;
- Manhole cover raising to prevent inflow;
- Construction or extension of small diameter storm drains for collection of private source inflow;
- A portion of a storm drain construction or extension project that is attributable to I/I reduction;
- Removal and/or rerouting of catch basins or area drains;
- Removal and/or rerouting of sump pump discharges;
- Removal and/or rerouting of roof and area drainage;
- Repair, removal and/or rerouting of sewer/storm drain cross connections; and,
- Paving costs that are reasonable and necessary to repair the roadway and/or sidewalk areas directly impacted by eligible construction work.

Please Note: The discharge of wastewater from the installation of a CIPP liner, as part of a sewer rehabilitation project, into the Municipal or MWRA sewerage system is prohibited, unless authorized by the Authority. Wastewater discharged from the CIPP liner installation into a pipeline must comply with MWRA Sewer Use Regulations 360 CMR 10.021-10.024, prior to mixing with any other streams. Authorization to discharge wastewater from the CIPP liner installation into a pipeline shall be obtained from the Authority at least thirty (30) calendar days prior to beginning the discharge. To obtain the “MWRA Request To Discharge From A CIPP Liner Into A Pipeline” form, please contact Kattia Thomas, Project Manager - Permitting, MWRA Toxic Reduction and Control, 2 Griffin Way, Chelsea, MA 02150 or kattia.thomas@mwra.com.

Please Note and See Section 2.8 (f): Any and all costs associated with the testing, handling, management, and disposal of hazardous waste, as defined under 310 CMR 30.000 are ineligible costs. Any and all costs associated with the testing, handling, management, and disposal of other contaminated or hazardous material (not meeting the definition of hazardous waste, as defined under 310 CMR 30.000) and determined to not be suitable for trench refill shall be limited to ten percent (10%) of the total eligible project cost. Costs associated with the removal, replacement, handling, and disposal of asbestos cement sewer pipe incidental to an eligible I/I Local Financial Assistance project shall be eligible.

- (b) Engineering services in connection with the bidding and inspection of eligible construction/rehabilitation to ensure that work is accomplished in accordance with design drawings and specifications and applicable State laws and activities incidental thereto, including but not limited to:
- Resident inspection; and,
 - Contract/construction administration.

- (c) Engineering services in connection with the preparation of plans, specifications, public bidding documents, and other materials for which the subsequent construction/rehabilitation will effect I/I reduction and activities incidental thereto, including but not limited to:
- Engineering design services; and,
 - Surveying and subsurface exploration.
- (d) Engineering and contractor services for facilities planning and/or other planning activities in connection with identification and/or quantification of infiltration and inflow sources and activities incidental thereto, including but not limited to:
- I/I analyses;
 - Sewer system evaluation surveys;
 - Physical inspections;
 - Building inspections for the purpose of identifying private inflow sources;
 - Rainfall simulation techniques including smoke testing, dyed water tracing, dye water flooding, etc.;
 - Internal television inspection, sonar inspection, etc.;
 - Light sewer cleaning necessary to facilitate internal television inspection and/or sewer rehabilitation as long as the total cost of cleaning and debris disposal does not exceed ten percent (10%) of the eligible project cost (please note that the direct or indirect discharge of residuals from the cleaning of storm and/or sanitary lines into the Municipal or MWRA sewerage system is prohibited); and,
 - Heavy sewer cleaning necessary to facilitate sewer rehabilitation as long as the total cost of cleaning and debris disposal does not exceed ten percent (10%) of the total eligible project cost.

Please Note: The Municipality must not allow discharges from a root/vegetation control project for its sewer maintenance program to enter its sanitary system unless it has written authorization from the Authority. Wastewater discharged from a root/vegetation control project must comply with MWRA Sewer Use Regulations, 360 CMR 10.021-10.024, prior to mixing with any other streams. At a minimum, within ten (10) working days prior to the commencement of the root/vegetation control project, the Municipality shall apply and submit a complete MWRA Root Control Questionnaire to the MWRA. Upon authorization from the MWRA, the Municipality shall conduct and discharge from its root/vegetation control project as stipulated in the MWRA's Authorization Letter. To obtain a MWRA Root Control Questionnaire, please contact Kattia Thomas, Project Manager, Permitting, Toxic Reduction and Control, MWRA, Operations, 2 Griffin Way, Chelsea, MA 02150 or kattia.thomas@mwra.com.

- (e) Purchase of materials to be used to eliminate or reduce infiltration and inflow, including but not limited to:
- Manhole covers and frames;
 - Manhole inflow prevention devices;
 - Sewer and/or storm drain pipe and appurtenances; and,
 - Chemical grouts or sealants.

- (f) I/I reduction projects in combined sewer areas that permanently remove the I/I from the collection system and do not allow the I/I to be rerouted to a downstream sewer tributary to the MWRA-owned Deer Island Treatment Facility.
- (g) Post rehabilitation certification and activities incidental thereto.
- (h) Direct labor costs only (not including overhead or overtime costs) for force account work associated with planning, design, construction, or construction inspection of eligible I/I identification and/or removal work.
- (i) Police details associated with eligible project work.
- (j) Establishment of a Massachusetts Municipal Depository Trust (MMDT) or similar account used solely for the deposit, withdrawal, and tracking of financial assistance funds.
- (k) Bond counsel services, or other legal services, in connection with review and execution of the Financial Assistance and Loan Agreements, Sewer Bond, and opinion of Bond Counsel.

2.8 Ineligible Project Costs

Costs which are ineligible under the I/I Local Financial Assistance Program include, but are not limited to:

- (a) Costs in excess of the approved financial assistance Award Amount.
- (b) Costs for services outside the scope of the approved project, except as modified by an MWRA approved revised project scope of services.
- (c) Ordinary operating expenses of public works departments, sewer commissions, sewer districts, or local government, and overhead and overtime costs associated with eligible force account work.
- (d) Costs for all sewer cleaning (including both light and heavy cleaning) and testing and debris disposal that are in excess of ten percent (10%) of the total eligible project cost.
- (e) Excessive paving costs that are not reasonable and necessary to repair the roadway and/or sidewalk areas directly impacted by eligible construction work.

- (f) 1. Any and all costs associated with the testing, handling, management, and disposal of hazardous waste, as defined under 310 CMR 30.000;

2. Any and all costs associated with the testing, handling, management, and disposal of other contaminated or hazardous material (not meeting the definition of hazardous waste, as defined under 310 CMR 30.000) and determined to not be suitable for trench refill that exceeds ten percent (10%) of the total eligible project cost; and,

3. **Please Note:** Costs associated with the removal, replacement, handling, and disposal of asbestos cement sewer pipe incidental to an eligible I/I Local Financial Assistance project are **eligible** costs.
- (g) Costs for projects which remove I/I from a sewer subsystem but reroute the I/I to a downstream sewer (projects of this type may include separation in upstream areas of combined sewer systems).
- (h) Costs incurred under third party agreements, absent specific contract language that conveys the applicable terms and conditions of the Financial Assistance Agreement to the third party (see Section 3.3).
- (i) Costs for which payment has been or will be received under any other MWRA, state, or federal grant or loan funding assistance program.
- (j) Costs of area-wide or basin planning not directly related to the project.
- (k) Costs for the preparation of an MWRA Financial Assistance Application or preparation of funding applications for any other agency.
- (l) Costs for development of, or revisions to, sewer use ordinances, sewer use rules and regulations, or sewer user charge systems.
- (m) Costs for the development or printing of operation and maintenance manuals.
- (n) Costs for the purchase and/or installation of permanent flow monitoring equipment in sewer systems.
- (o) Costs for the purchase of sewer cleaning and/or TV inspection equipment.
- (p) Charges for the use of vehicles or equipment owned by the applicant.
- (q) Costs for obtaining permits or licenses.
- (r) Bonus payments to contractors for completion of construction earlier than the contracted completion date.
- (s) Personal injury compensation, claims related to wrongful deaths, or property damages arising out of the project, however determined.

- (t) Costs of equipment or material procured in violation of state or federal law.
- (u) Fines and penalties.
- (v) Costs for the purchase of real property.

2.9 Commitment and Distribution of Funds

Throughout the term of the Program, Financial Assistance and Loan Agreements will be executed on (or about) the following quarterly funding distribution dates: February 15, May 15, August 15, and November 15. Financial Assistance and Loan Agreements will be executed by the MWRA's Executive Director, Director of Finance, or Treasurer on behalf of the Authority and an appropriate representative of the community who has been authorized to act as the municipality's agent. Documentation of this authorization will be made part of the executed Financial Assistance Agreement. The Loan Agreement will incorporate an opinion from the community's bond counsel stating that the loan portion of the financial assistance is a valid general obligation of the municipality. The community must also certify that all actions required by the municipality to expend the financial assistance funds have been obtained; that all permits, easements, and all other project requirements and approvals have been obtained; and that implementation of the project has begun or is intended to begin within ninety (90) calendar days of execution of the agreement.

The Financial Assistance Agreement will contain a number of additional project specific terms and conditions that the municipality will agree to upon execution of the agreement. Following execution of the Financial Assistance and Loan Agreements, MWRA will have the entire financial assistance Award Amount transferred into a Massachusetts Municipal Depository Trust (MMDT) account designated and arranged by the community. **Please Note: All financial assistance funds, together with the earnings (including all accrued interest) from the MMDT account, shall be applied to the cost of MWRA-approved community I/I reduction projects.**

2.10 Multiple Financial Assistance Distributions

If a community seeks additional MWRA funding for additional eligible project costs on a previously funded project, a separate Financial Assistance Application may be submitted to MWRA. Financial assistance for additional community project costs or additional projects will be provided through execution of a separate Financial Assistance Agreement. Communities may receive financial assistance through the execution of multiple Financial Assistance Agreements as long as the total Financial Assistance Allocation (established in Section 2.4) is not exceeded. The repayment amount and schedule established in each Financial Assistance Agreement shall not be modified due to the execution of a second (or multiple) Financial Assistance Agreement. The repayment amount and schedule for each Financial Assistance Agreement shall be established independently.

2.11 Limitation on Financial Assistance Award

The award of financial assistance by MWRA shall not constitute a commitment for approval of financial assistance for a subsequent project or additional work under the initial project. If a subsequent project or additional work under the initial project is initiated prior to execution of a Financial Assistance Agreement, the applicant proceeds at its own risk. However, all costs incurred for community I/I identification/reduction projects on or after July 1, 2009 will be considered for eligibility under the I/I Local Financial Assistance Program, even if the project is underway prior to submittal of the Financial Assistance Application.

2.12 Interaction With Other MWRA Funding Programs, the Clean Water State Revolving Fund, and Other Programs of Assistance

All costs for which payment has been or will be received under MWRA's CSO Program and the Clean Water State Revolving Fund (CWSRF) or any other MWRA, state, federal, or other program of assistance shall not be considered an "eligible" cost under the MWRA I/I Local Financial Assistance Program. However, a community's acquisition of other grant or loan funds that are not requested for eligibility under the MWRA I/I Local Financial Assistance Program, shall not adversely influence the award of MWRA financial assistance.

2.13 Massachusetts Municipal Depository Trust (MMDT) Account and Use of Earned Interest

The applicant is required to establish a Massachusetts Municipal Depository Trust (MMDT) or similar account for the Program. The MWRA will deposit the financial assistance funds into the community-established MMDT account. The financial assistance funds must remain separated from other community funds and accounts. No other community funds may be deposited to this account. **Funds must be drawn from the MMDT account to pay project expenses, or to reimburse other municipal accounts that have been used to pay project expenses. The MMDT account must be drawn down in parallel with project expenses throughout the life of the project. Investment reports from the account shall be furnished to MWRA on a regular basis. All interest earned on the financial assistance funds shall be used by the community to cover eligible project costs or additional phases of the community's I/I reduction program, as approved by MWRA.**

SECTION 3 - FINANCIAL ASSISTANCE AGREEMENT

3.1 Overview

Following review of a community's Financial Assistance Application, MWRA will determine the eligible project cost and establish the project Award Amount. Once the Award Amount is determined, MWRA will draft a Financial Assistance Agreement. Prior to the distribution of funds to any community under the Program, both the MWRA and the community will be required to execute a Financial Assistance Agreement. The Financial Assistance Agreement will stipulate all applicable terms and conditions of the grant and loan funding provided by MWRA for the community's I/I reduction project, including, but not limited to: project scope of work (Attachment A of the Agreement); project schedule (Attachment B of the Agreement); documentation that the community representative who executes the agreement is authorized to act as the municipality's agent (Attachment C of the Agreement); project inspection, reporting, audit, and closeout provisions; and project specific special conditions. The applicant shall signify its acceptance of the terms and conditions through execution of the Financial Assistance Agreement.

Appended to the Financial Assistance Agreement will be a separate Loan Agreement. The Loan Agreement process includes: (1) an Opinion of the Community's Bond Counsel stating that the loan is a valid general obligation of the municipality; and (2) a Sewer Bond prepared by the Community's Bond Counsel and executed by authorized community representatives. The loan repayment amount and schedule is stipulated in the Sewer Bond.

The Financial Assistance and Loan Agreements will not be executed by the Authority until such time as a draft Sewer Bond and Opinion of the Community's Bond Counsel have been received by the Authority. Financial assistance funds will not be distributed by the Authority until such time as the original Sewer Bond and Opinion of the Community's Bond Counsel have been received by the Authority.

3.2 Projects With Retroactive Funding

For projects where a community seeks to apply for MWRA financial assistance funds to retroactively reimburse project costs previously advanced via community funds, the community is advised that local authorization (via Town Meeting approval, City Council vote, etc.) approving loan repayment to MWRA is generally required to have occurred **prior** to the expenditure of project costs. With appropriate approvals, community funds may provide bridge financing for some portion of the project, while awaiting future MWRA financial assistance funding. As with all community financing options, the community's financial advisor and Bond Counsel representative should be consulted on proper authorization wording and appropriate timing of authorization/borrowings to ensure each community's unique legal requirements are met.

3.3 Assignment of Agreement Requirements to a Third Party

For cost efficiencies, some portion of local projects may be performed under an agreement with a separate agency (third party). Examples of this type of arrangement include I/I reduction work contained in contracts performed by Massachusetts DOT, DCR, MBTA, BRA, Boston Public Works, etc. Absent specific contract language, the third party would not generally be subject to the terms and conditions of the Financial Assistance Agreement. If the applicant demonstrates to the MWRA that an agreement exists between the local community/commission and the third party that conveys the applicable terms and conditions of the Financial Assistance Agreement to the third party, then the costs for the I/I reduction work will be considered for eligibility. If no such agreement exists, then project costs incurred under third party agreements will be considered ineligible.

SECTION 4 - LOAN REPAYMENT REQUIREMENTS

4.1 Repayment of Interest-Free Loan for Program Phases 9 and 10

For Phase 9 and 10 I/I Local Financial Assistance Program funding (total of \$80 million for each phase), seventy-five percent (75%) of the total Award Amount will be provided as a grant and twenty-five percent (25%) will be provided as an interest-free loan. Communities will need to exhaust their rollover funds remaining from Phases 6, 7, and 8 prior to becoming eligible for distribution of Phase 9 and 10 funds. For Phase 9 and 10 funding, the interest-free loan portion will be repaid to MWRA in ten (10) equal payments over a ten-year period, beginning one year from the original quarterly funding distribution date (as established in Section 2.9). Each loan repayment will be due to the MWRA annually on the quarterly distribution date. The loan can be repaid over a shorter period, if the community so desires.

For community I/I Local Financial Assistance Program funding distributions that include a combination of (1) remaining Phase 6, 7, or 8 rollover funds together with (2) Phase 9 or 10 funding, the interest-free loan portion will be repaid to MWRA in five (5) equal payments over a five-year period, beginning one year from the original quarterly funding distribution date (as established in Section 2.9). Each loan repayment will be due to the MWRA annually on the quarterly distribution date. The loan can be repaid over a shorter period, if the community so desires.

4.2 Repayment of Interest-Free Loan for Program Phases 6, 7, and 8

For remaining Phase 6, 7, and 8 rollover funds in the I/I Local Financial Assistance Program funding, forty-five percent (45%) of the total Award Amount will be provided as a grant and fifty-five percent (55%) will be provided as an interest-free loan. Communities will need to exhaust their rollover funds remaining from Phases 6, 7, and 8 prior to becoming eligible for distribution of Phase 9 and 10 funds. The interest-free loan portion for remaining Phase 6, 7, and 8 funds will be repaid to MWRA in five equal payments, over a five-year period, beginning one year from the original quarterly funding distribution date (as established in Section 2.9). Each loan repayment will be due to the MWRA annually on the quarterly distribution date. The loan can be repaid over a shorter period, if the community so desires.

4.3 Repayment Invoicing by MWRA

Forty-five (45) days prior to each annual loan repayment date, MWRA will send the designated community representative an invoice that will include the following:

- (1) the repayment terms which will be 45 days from the invoice date;
- (2) the loan repayment due date;
- (3) the annual loan repayment amount;
- (4) a description of the charge (including original distribution date);
- (5) the MWRA remit address for checks and wires; and,
- (6) the contact number and contact person within the MWRA Treasury Department to call with questions on repayment procedures.

The loan may be repaid early, in less than the designated term (see Sections 4.1 and 4.2, above), if the community so desires. Payments should continue to be made on the anniversary date of the loan, but the amount can be increased if the community wishes to pay off the loan early. If a community wishes to pay an amount in advance of the anniversary date and prior to receiving an invoice, identifying correspondence sent under certified mail should accompany the payment in order for the MWRA Treasury Department to properly credit the remaining balance due to the proper account. All payments should be clearly identified on the remittance copy of the invoice, especially if the amount paid differs from the amount of the invoice.

SECTION 5 - EXPENDITURE VERIFICATION REQUIREMENTS, PROJECT INSPECTION, PROJECT CLOSEOUT, AND AUDIT PROVISIONS

5.1 Expenditure Verification Requirements

The community shall submit progress reports to MWRA that outline the overall progress of the project, the progress of key project tasks, and the financial status of the project relative to the project budget. MWRA will provide standardized forms for progress reporting. Progress reports will be submitted to a designated MWRA Project Manager who will be the key Authority contact person for all community inquiries regarding the I/I Local Financial Assistance Program. To enable MWRA to track project expenditures, the community shall append to each progress report appropriate cost backup information that will document the costs specific to the funded project. Appropriate cost backup information shall include, but not be limited to, consultant and/or contractor invoices, purchase orders, force account time sheets, etc. The frequency of progress reporting will depend on the project cost, duration, and schedule. Most progress reports are expected to be processed on a semi-annual basis.

5.2 Project Inspection

A community receiving funding under the I/I Local Financial Assistance Program shall make the project site and all project records available to MWRA staff for review during the course of the project. MWRA staff will periodically monitor the progress of work for which MWRA financial assistance has been provided. The intent of these periodic inspections will be to insure that the project is: (1) proceeding substantially as defined in the Scope of Work and Project Schedule detailed in the executed Financial Assistance Agreement; and (2) proceeding in a manner which will produce the quantitative I/I reduction result which the community estimated would be achieved in the Financial Assistance Application. Appropriate wording that will allow Authority staff access to the project site and project records shall be included in the Financial Assistance Agreement and project contracts related to performance of work for which the community is receiving financial assistance funding.

5.3 Project Closeout Provisions

Upon completion of the project, the community shall notify MWRA that the project is complete and shall certify that all work included in the Scope of Work section of the executed Financial Assistance Agreement has been completed and performed in accordance with said Agreement. MWRA will provide the community with a project closeout package that includes a summary of all project expenditures and identifies the final project cost. The community shall review, execute, and return the project closeout package to MWRA. Prior to project closeout, MWRA will work cooperatively with the community to make every effort to expend the total project financial assistance Award Amount on project related (or other approved I/I reduction) expenditures. To ensure that the total project financial assistance Award Amount is expended, MWRA will consider allowing: (1) an increase in the quantity of existing eligible items in the project Scope of Work, (2) additions to the project Scope of Work, or (3) the transfer of unused funding to a second (or future) funded project

which has additional eligible project costs which were not already funded under a separate Financial Assistance Agreement.

If the final eligible project cost equals or exceeds the project financial assistance Award Amount, no revision to the grant portion of the financial assistance need be made during project closeout. If the final eligible project cost is less than the project financial assistance Award Amount, a revision to the grant portion of the financial assistance must be made during project closeout. The difference between the financial assistance Award Amount and the final project closeout eligible cost will be calculated and defined as the project "Shortage Amount". The community must repay the grant portion of the project Shortage Amount to the MWRA. The existence of a project shortage will not affect the loan repayment amount or schedule in any way. Repayment of the grant portion of the project Shortage Amount shall be made simultaneously with the next scheduled loan repayment following the project closeout. The MWRA will provide the community a separate invoice for this payment forty-five (45) days prior to the next loan repayment date.

5.4 Project Audit Provisions

The community, the community's engineer(s), and the community's contractor(s) shall maintain books, records, documents, and other evidence directly related to the performance on all work receiving funding under the Financial Assistance Agreement in accordance with generally accepted professional practice and appropriate accounting procedures and practices. The community, the community's engineer(s), and the community's contractor(s) shall also maintain the financial information and data used by the engineer(s) and contractor(s) in the preparation or support of the cost submission and a copy of the cost summary submitted to the community. MWRA shall have access to such books, records, documents, and other evidence for inspection, audit, and copying during normal business hours, upon ten (10) days notice and at the Authority's expense. The community, the community's engineer(s), and the community's contractor(s) shall provide proper facilities for such access and inspection. All documents shall be kept for at least seven (7) years after the final payment to the engineer(s) or contractor(s), or at least seven (7) years after closeout of the project, whichever is later.

The community shall agree to include the wording of the above paragraph in all contracts and subcontracts related to performance of work for which the community is receiving MWRA financial assistance funding.

Audits conducted by MWRA, or its duly authorized representatives, shall be in accordance with generally accepted auditing standards and established procedures and guidelines of MWRA. Such audits shall be conducted at the expense of MWRA upon ten (10) days notice to the community.

If requested, the community agrees to provide MWRA with a copy of the community's annual audited financial statements within a reasonable time after the issuance thereof, together with a certificate of the community stating that the community is in compliance with its obligations under this agreement.

SECTION 6 - EQUAL EMPLOYMENT OPPORTUNITY, ANTIDISCRIMINATION, AND AFFIRMATIVE ACTION GOALS

6.1 Overview

The community shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, handicap status or national origin. The community, the community's engineer(s), and the community's contractor(s) shall comply with all applicable laws and regulations pertaining to nondiscrimination, equal opportunity and affirmative action, including without limitation, executive orders and rules and regulations of federal and state agencies of competent jurisdiction. As detailed below, the community shall make positive efforts to use minority-owned business enterprises (MBE) and woman-owned business enterprises (WBE) for professional services, non-professional services and construction related work that has received funding under the I/I Local Financial Assistance Program. The community shall also require all construction contractors and subcontractors to make positive efforts to meet the percentage goal for minority employee work force hours and woman employee work force hours, as detailed below. Minority and women-owned businesses (MBEs and WBEs) who participate as part of this Program should be certified as such by the Supplier Diversity Office (SDO).

For the purpose of establishing MBE/WBE participation goals and minority/woman employee work force hour goals for projects receiving funding under the I/I Local Financial Assistance Program, all eligible project costs should be designated to one of the following four categories of work:

- (a) Professional Services (see Section 6.2);
- (b) Non-Professional Services (see Section 6.3);
- (c) Construction (see Section 6.4); and,
- (d) Force Account Work (see Section 6.5).

The goals for MBE/WBE participation and minority/woman employee work force hour percentage are specific to the category of work being performed. The goals for each category of work are detailed below.

6.2 Goals for Professional Services

A community that receives MWRA I/I Local Financial Assistance Program funds for a project under the Professional Services category of work should make positive efforts to achieve a goal of 7.18 percent participation of Minority-owned Business Enterprise(s) and 5.77 percent participation of Woman-owned Business Enterprise(s) within project contracts. At a minimum, the community should allow MBEs and WBEs the maximum feasible opportunity to compete for subagreements to be performed under the project. The community will not be required to include the MWRA's MBE/WBE Compliance Forms or the MWRA's Requirements for Minority and Woman Business Enterprise and Equal Employment Opportunity Consultant Services Forms within its professional service contracts.

The community shall agree to include the wording of the above paragraph in all contracts and subcontracts related to performance of work for which the community is receiving MWRA financial assistance funding.

6.3 Goals for Non-Professional Services

A community that receives MWRA I/I Local Financial Assistance Program funds for a project under the Non-Professional Services category of work should make positive efforts to achieve a goal of 5.61 percent participation of Minority-owned Business Enterprise(s) and a goal of 4.88 percent participation of Woman-owned Business Enterprise(s) within project contracts. At a minimum, the community should allow MBEs and WBEs the maximum feasible opportunity to compete for subagreements to be performed under the project. The community will not be required to include the MWRA's Supplemental Provisions for Equal Employment Opportunity, Antidiscrimination and Affirmative Action Forms within its construction contracts/specifications or non-professional service contracts.

The community shall agree to include the wording of the above paragraph in all contracts and subcontracts related to performance of work for which the community is receiving MWRA financial assistance funding.

6.4 Goals for Construction

A community that receives MWRA I/I Local Financial Assistance Program funds for a project under the Construction category of work should make positive efforts to achieve: (1) a minority employee work force goal of 15.3 percent, (2) a woman employee work force goal of 6.90 percent, (3) a goal of 7.24 percent participation of Minority-owned Business Enterprise(s), and (4) a goal of 3.60 percent participation of Woman-owned Business Enterprise(s) within project contracts. At a minimum, the community should allow MBEs and WBEs the maximum feasible opportunity to compete for subagreements to be performed under the project. The community will not be required to include the MWRA's Supplemental Provisions for Equal Employment Opportunity, Antidiscrimination and Affirmative Action Forms within its construction contracts/specifications or non-professional service contracts.

The community shall agree to include the wording of the above paragraph in all contracts and subcontracts related to performance of work for which the community is receiving MWRA financial assistance funding.

6.5 Force Account Work

The Community shall strive to achieve on the MWRA's I/I Local Financial Assistance Program the labor participation goals contained herein. Said participation goals shall apply in each job category on this program including but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers and those classes of work enumerated in Section 44F of Chapter 149 of the Massachusetts General Laws. The participation goals for this project shall be **15.3%** for minorities and **6.9%** for women. The participation goals, as set forth herein, shall not be construed as quotas or set-asides; rather, such participation goals will be used to measure the progress of the Commonwealth's equal opportunity, non-discrimination and affirmative action program.

SECTION 7 - INSTRUCTIONS FOR COMPLETING

FINANCIAL ASSISTANCE APPLICATION

7.1 Application Instructions

Each MWRA service area community may apply to the Authority for funding under the I/I Local Financial Assistance Program by completing and filing the required application form. The Authority shall review each submitted application to determine the adequacy, accuracy and completeness of the information contained therein. MWRA may request the applicant provide additional project information and/or attend a meeting to review project details.

The MWRA I/I Local Financial Assistance Program Financial Assistance Application is presented as Attachment 1. All questions within the application must be answered completely and accurately. The application and all supporting documentation should be submitted to:

Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129
Attn: Planning Department, Community Support Program

An electronic version of the application may be obtained from the Authority's web site at www.mwra.com or by contacting the MWRA Community Support Program. The direct link to the I/I Financial Assistance page is: <http://www.mwra.com/comsupport/ii/iiprogram.html>. A discussion of each section of the Financial Assistance Application is presented below.

Section 1 - Financial Assistance Requested

This section is self-explanatory.

Section 2 - Project Description

The applicant should provide as complete and detailed information as possible on the proposed project. The information provided will be reviewed by MWRA staff to determine if the project is a viable I/I identification/reduction project and assess eligible project costs. It is important that the project proponent state the estimated infiltration and/or inflow reduction anticipated from completion of the project construction phase. Included in Section 15 of the Financial Assistance Application is a form that requests the community's estimate of peak and annual average infiltration and/or inflow reduction that may be achieved following the construction phase of the project. Submittal of this information will allow the MWRA to provide the community with information that may be helpful in analyzing the project's potential cost benefit. This form may be submitted with the application or prior to the submittal of the full application so that the community may review the results of the Authority's cost benefit information. For more detailed information, see the narrative of Section 15 - Estimated I/I Reduction and Potential Cost Benefit of I/I Removal.

Section 3 - Documentation of Project Need

Identify records which document the project's need, including, but not limited to: report recommendations (Facility Plans, I/I Reports, Sewer System Evaluation Surveys); physical surveys and internal TV inspections; and/or flow records from metering, pump station records, or other pertinent DPW maintenance records.

Section 4 - Project Schedule

The application must contain a realistic schedule outlining important milestones in the planning, design, or construction phases of the project, including the project start date.

Section 5 - Map of Project

The application should be accompanied by a project map, denoting the collection system and/or general plan of the proposed project site. If no map or plan is submitted with the application, an appropriate explanation must be provided.

Section 6 - Project Funding

The applicant must identify if one hundred (100) percent of the proposed project funding will be derived from the MWRA I/I Local Financial Assistance Program or if a portion of the project funds will come from other funding sources. If additional funds are required to perform the project, the applicant must identify such funds and their sources in this section of the application. Documentation of the availability of the additional funds should be included with the application or, if the additional funding is anticipated through a future action, the anticipated availability date of the additional funds should be provided.

Section 7 - Summary of Costs

In the space provided (or as an attachment) list each project phase (i.e. Planning, Design, Construction, Construction Services, etc.). Under each phase list the major tasks of work required to complete the project. For each major task provide an estimate of the total cost and eligible cost under the appropriate heading. Major tasks may include those listed as eligible project costs in Section 2.7 of the Program Guidelines or other costs that may or may not be eligible for financial assistance funding. **Note: If construction paving costs represent more than ten percent (10%) of the project cost, they should be identified as a separate project phase or subtask in Section 7 - Summary of Costs.** At the bottom of the Summary of Costs section, provide the date of the cost estimate, the appropriate Engineering News Record (ENR) Construction Cost Index, and the name of the person or firm who developed the cost estimate. Engineering costs should be broken down into the major engineering tasks as outlined in a standard engineering agreement. The following information should be provided for each engineering task: staff labor category, staff hours, hourly rates, direct labor costs, indirect labor costs, other direct costs and/or expenses, etc. For ease of preparation, a cost spreadsheet form may be submitted. Construction costs should be documented through an engineering cost estimate or bid tabulation, if available.

Section 8 - Interdependent Projects

The application must note whether financing has been received or is being requested for this project, or a separate phase of the project, from a State grant, the Clean Water State Revolving Fund (CWSRF) program, or any other federal, state or other funding program. The applicant must specify interdependent projects or portions of projects. For example, if the applicant is performing the design phase of a project under State grant or CWSRF funding, and MWRA financial assistance is being requested for the construction phase, then the construction phase is dependent on completion of the design.

Section 9 - Intermunicipal Projects

If the project will serve two or more municipalities, or one community's project extends into another community, the applicant must explain the circumstances. State whether the municipalities have, or propose to have, an intermunicipal agreement or other legally binding documents covering financing, construction, and/or operation of the proposed improvements. If not, detail historic cooperative service relationships between the parties.

Section 10 - Project Permits and Certificates

The applicant should specify permits and/or certificates that have been obtained or may be required prior to initiation of the proposed project. A list of permits and certificates, that may be applicable, is provided in the application. Additional permits and/or certificates may be required that are not shown on the list provided.

Section 11 - Construction Plans, Specifications, and Bidding Documents

For proposed construction projects and equipment/material purchases, the applicant should outline the status of the plan, specification, and bidding document preparation, and the time schedule for completion. If these documents are not required for the project, an explanation must be included in this section.

Section 12 - Engineering Agreement

For all proposed projects, the applicant should outline the status of an engineering agreement and time schedule for its completion. If no engineering agreement is required for the project, an explanation must be included in this section.

Section 13 - Force Account Work

If the applicant proposes to perform any funding eligible portion of the project (planning, design, construction services, or construction activities) using its own staff (City, Town, District, or Commission employees), a description of the proposed activities must be provided. The use of the applicant's own employees is defined as "force account work".

Only direct labor costs associated with force account work may be approved as eligible costs if documentation of the direct labor hours and cost per hour are provided to MWRA. Charges for ordinary operating expenses, overhead, overtime, and/or the use of vehicles or equipment owned by the applicant and staff time to obtaining permits or licenses are ineligible.

To document Force Account Work, MWRA requires detailed records of staff hours worked on the project. As part of its regular project progress reports to MWRA, the community must provide a breakdown of staff names, titles, job duties, hours worked on the project, and hourly pay rates. Detailed records such as weekly time sheets should be submitted as backup to summary spreadsheet information. If weekly time sheet information is not available for submittal, an appropriate community representative with direct knowledge of the project activities will be required to certify via signed statement that the force account hours being submitted to MWRA as eligible work are authentic.

Section 14 - Other Project Information

The applicant is encouraged to provide any other additional information that may enable the Authority to determine that the project is a viable I/I identification/reduction project and assess eligible project costs.

Section 15 - Estimated I/I Reduction and Potential Cost Benefit of I/I Removal

The applicant should provide as complete information as possible on the estimated infiltration and/or inflow reduction that is anticipated to be achieved when the construction phase of the project is concluded. For projects that will reduce groundwater infiltration, the peak month infiltration reduction and average annual infiltration reduction should be estimated. For projects that will reduce stormwater inflow, the design storm peak hour inflow rate reduction, design storm inflow volume reduction, and average annual inflow reduction should be estimated. The "design storm" is defined (by MassDEP) as a storm with a one year return period, a one hour peak rainfall intensity of about 0.87 inches, and a six hour cumulative rainfall of about 1.72 inches (see MassDEP's Guidelines for Performing I/I Analyses and Sewer System Evaluation Surveys, revised January 1993).

If the applicant can not estimate the average annual infiltration or average annual inflow reduction, MWRA staff can provide an estimate by prorating the peak month infiltration reduction, the design storm peak hour inflow rate reduction, or the design storm inflow volume reduction based on historical wastewater metering system flow data.

Using the I/I reduction estimates, Authority staff will run the MWRA wholesale rate model for the preceding fiscal year. The dollar value of the rate reduction that would have been realized by the applicant if the estimated flow reduction had taken place in the previous year will be estimated. MWRA staff will provide the results of the rate model analysis to the community. This information may be helpful in analyzing the project's potential cost benefit. As a standard, the analysis will be performed holding all other MWRA service area community flows constant. However, if requested by the applicant, rate model runs can be made to simulate the net affect other community potential flow reductions may have on the applicant's wholesale sewer rate.

The applicant may submit the I/I reduction information with the financial assistance application. However, at the applicant's discretion, the I/I reduction information form may be submitted to the MWRA prior to the submittal of the full application. This would allow the community to review the results of the Authority's wholesale rate analysis and use the information as a decision making tool when evaluating one or more I/I projects. For more information on this process, the applicant is encouraged to contact MWRA Community Support Program staff.

APPENDIX A - DEFINITION OF TERMS

Authority: The Massachusetts Water Resources Authority.

Board of Directors: The Board of Directors of the Massachusetts Water Resources Authority.

Combined Sewer: A sewer intended to serve as both a sanitary sewer and a storm drain.

Cost-effective: The cost of removing infiltration or inflow is less than the cost for transporting and treating these flows.

Defect: A specific source of infiltration/inflow.

Dyed Water Tracing/Flooding: The insertion of colored water into the sewer to confirm a suspect inflow source or to identify the exact location of indirect cross connections between storm drains and sanitary sewers.

Excessive Infiltration/Inflow: The quantity of infiltration or inflow that can be shown to be cost-effective to remove from the collection system.

Executive Director: The Executive Director of the Massachusetts Water Resources Authority.

Financial Assistance: Monies provided to public entities.

Grant: Monies provided to public entities that do not require repayment.

Groundwater Migration: The tendency for groundwater to continue to enter a collection system through additional defects following the rehabilitation of defects that were known to be leaking previously.

Infiltration: Extraneous water entering a sewer system from the ground through sources such as defective pipes, pipe joints, connections, and manhole walls. Infiltration does not include, and is distinguished from, inflow.

Infiltration/Inflow: The quantity of water from both infiltration and inflow without distinguishing the source.

Inflow: Extraneous water discharged into a sewer system from sources such as sump pumps, roof leaders, cellar drains, foundation drains, surface drains, drains from springs and swampy areas, manhole covers, catch basins, cross-connections from storm drains, cooling water discharges, etc. Inflow does not include, and is distinguished from, infiltration.

Infiltration/Inflow Analysis: Initial planning phase study. The study goal is to quantify infiltration and inflow in a sewage collection system.

Infiltration/Inflow Reduction: The removal of infiltration and/or inflow from the collection system.

Infiltration/Inflow Rehabilitation: Construction associated with the removal of infiltration and/or inflow from the collection system.

Light Sewer Cleaning: A minimal amount of sewer cleaning often performed prior to internal TV inspection (usually one or two passes with a hydraulic cleaning machine).

Loan: Monies provided to public entities that are required to be repaid over a specified time period.

Sanitary Flow: The component of wastewater that includes domestic, commercial, institutional, and industrial sewage flow. Specifically excludes infiltration/inflow.

Sanitary Sewer: A sewer intended to carry only wastewater and not storm water.

Service Area Communities: All municipalities, sewer districts and commissions served by the MWRA's Deer Island Treatment Facility.

Service Lateral: The sewer pipe from a building to the public sewer.

Sewer System Evaluation Survey: Second phase planning study following an Infiltration/Inflow Analysis. The survey goal is to identify specific infiltration and inflow sources and provide recommendations for rehabilitation.

Smoke Testing: The introduction of smoke in the sewer system, under the pressure of one or more blowers, which causes the smoke to fill the sewer system and escape from plumbing vent pipes and all other direct connections to the sewer system, such as catch basins or roof leaders.

Storm Drain: A drain (or sewer) intended to carry only storm water, surface runoff, street wash water, and drainage. Specifically intended to exclude sanitary flow.

Treasurer: The Treasurer of the Massachusetts Water Resources Authority.

TV Inspection: Internal inspection of a sewer by pulling a television camera through the pipeline and viewing the physical condition on a TV monitor. Generally, a videotape / DVD record is made of each inspection.

Wastewater: The entire flow carried by sewers including: sanitary flow, infiltration, and inflow.

APPENDIX B - ABBREVIATIONS

BRA: Boston Redevelopment Authority

CEA: Cost Effective Analysis

CSO: Combined Sewer Overflow

CWSRF: Clean Water State Revolving Fund

CZM: Coastal Zone Management

DCR: Department of Conservation and Recreation

DOT: Massachusetts Department of Transportation

EIR: Environmental Impact Report

ENF: Environmental Notification Form

ENR: Engineering News Record

EPA: United States Environmental Protection Agency

FY: Fiscal Year

gpd: gallons per day

I/I: Infiltration/Inflow

MassDEP: Massachusetts Department of Environmental Protection

MBE: Minority-owned Business Enterprise

MBTA: Massachusetts Bay Transit Authority

mgd: million gallons per day

MMDT: Massachusetts Municipal Depository Trust

MWRA: Massachusetts Water Resources Authority

O&M: Operation and Maintenance

SDO: Supplier Diversity Office

SSes: Sewer System Evaluation Survey

WBE: Woman-owned Business Enterprise